

CRF Errors Corrected by the STIC Systems Branch

Serial Number: 09/873,881B

CRF Processing Date: 3/18/2002
 Edited by: [Signature]
 Verified by: [Signature] (STIC staff)

ENTERED

- ☐ Changed a file from non-ASCII to ASCII
- ☐ Changed the margins in cases where the sequence text was "wrapped" down to the next line.
- ☐ Edited a format error in the Current Application Data section, specifically: _____
- ☐ Edited the Current Application Data section with the actual current number. The number inputted by the applicant was ☐ the prior application data; or ☐ other _____
- ☐ Added the mandatory heading and subheadings for "Current Application Data".
- ☐ Edited the "Number of Sequences" field. The applicant spelled out a number instead of using an integer.
- ☐ Changed the spelling of a mandatory field (the headings or subheadings), specifically: _____
- ☐ Corrected the SEQ ID NO when obviously incorrect. The sequence numbers that were edited were: _____
- ☐ Inserted or corrected a nucleic number at the end of a nucleic line. SEQ ID NO's edited: _____
- ☐ Corrected subheading placement. All responses must be on the same line as each subheading. If the applicant placed a response below the subheading, this was moved to its appropriate place.
- ☐ Inserted colons after headings/subheadings. Headings edited included: _____
- ☐ Deleted extra, invalid, headings used by an applicant, specifically: _____
- ☐ Deleted: ☐ non-ASCII "garbage" at the beginning/end of files; ☐ secretary initials/filename at end of file; ☐ page numbers throughout text; ☐ other invalid text, such as _____
- ☐ Inserted mandatory headings, specifically: _____
- ☐ Corrected an obvious error in the response, specifically: _____
- ☐ Edited identifiers where upper case is used but lower case is required, or vice versa.
- ☐ Corrected an error in the Number of Sequences field, specifically: _____
- ☐ A "Hard Page Break" code was inserted by the applicant. All occurrences had to be deleted.
- ☐ Deleted *ending* stop codon in amino acid sequences and adjusted the "(A)Length:" field accordingly (error due to a PatentIn bug). Sequences corrected: _____
- ☒ Other: inserted hard return; seq. 19.



OIPE

RAW SEQUENCE LISTING

DATE: 03/18/2002

PATENT APPLICATION: US/09/873,881B

TIME: 08:30:47

Input Set : A:\PTO.AMC.txt

Output Set: N:\CRF3\03182002\I873881B.raw

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3 <110> APPLICANT: Scott, Fred W.
5 <120> TITLE OF INVENTION: Recombinant Multivalent Viral Vaccine
7 <130> FILE REFERENCE: 18617.0016
9 <140> CURRENT APPLICATION NUMBER: US 09/873,881B
10 <141> CURRENT FILING DATE: 2001-06-04
12 <150> PRIOR APPLICATION NUMBER: US 08/552,369
13 <151> PRIOR FILING DATE: 1995-11-03
15 <160> NUMBER OF SEQ ID NOS: 19
17 <210> SEQ ID NO: 1
18 <211> LENGTH: 2254
19 <212> TYPE: DNA
20 <213> ORGANISM: feline panleukopenia virus
W--> 21 <220> FEATURE:
22 <223> OTHER INFORMATION:
24 <400> SEQUENCE: 1
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26 Met Ser Asp Gly Ala Val Gln Pro Asp Gly Gly Gln Pro Ala Val
27 1 5 10 15
29 aga aat gaa aga gct aca gga tct ggg aac ggg tct gga ggc ggg 90
30 Arg Asn Glu Arg Ala Thr Gly Ser Gly Asn Gly Ser Gly Gly Gly
31 20 25 30
33 ggt ggt ggt ggt tct ggg ggt gtg ggg att tct acg ggt act ttc 135
34 Gly Gly Gly Gly Ser Gly Gly Val Gly Ile Ser Thr Gly Thr Phe
35 35 40 45
37 aat aat cag acg gaa ttt aaa ttt ttg gaa aac gga tgg gtg gaa 180
38 Asn Asn Gln Thr Glu Phe Lys Phe Leu Glu Asn Gly Trp Val Glu
39 50 55 60
41 atc aca gca aac tca agc aga ctt gta cat tta aat atg cca gaa 225
42 Ile Thr Ala Asn Ser Ser Arg Leu Val His Leu Asn Met Pro Glu
43 65 70 75
45 agt gaa aat tat aaa aga gta gtt gta aat aat atg gat aaa act 270
47 Ser Glu Asn Tyr Lys Arg Val Val Val Asn Asn Met Asp Lys Thr
48 80 85 90
50 gca gtt aaa gga aac atg gct tta gat gac act cat gta caa att 315
51 Ala Val Lys Gly Asn Met Ala Leu Asp Asp Thr His Val Gln Ile
52 95 100 105
54 gta aca cct tgg tca ttg gtt gat gca aat gct tgg gga gtt tgg 360
55 Val Thr Pro Trp Ser Leu Val Asp Ala Asn Ala Trp Gly Val Trp
56 110 115 120
58 ttt aat cca gga gat tgg caa cta att gtt aat act atg agt gag 405
59 Phe Asn Pro Gly Asp Trp Gln Leu Ile Val Asn Thr Met Ser Glu
60 125 130 135
62 ttg cat tta gtt agt ttt gaa caa gaa att ttt aat gtt gtt tta 450

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Input Set : A:\PTO.AMC.txt

Output Set: N:\CRF3\03182002\I873881B.raw

63	Leu	His	Leu	Val	Ser	Phe	Glu	Gln	Glu	Ile	Phe	Asn	Val	Val	Leu	
64					140					145					150	
66	aag	act	gtt	tca	gaa	tct	gct	act	cag	cca	cca	act	aaa	gtt	tat	495
67	Lys	Thr	Val	Ser	Glu	Ser	Ala	Thr	Gln	Pro	Pro	Thr	Lys	Val	Tyr	
68					155					160					165	
70	aat	aat	gat	tta	act	gca	tca	ttg	atg	gtt	gca	tta	gat	agt	aat	540
71	Asn	Asn	Asp	Leu	Thr	Ala	Ser	Leu	Met	Val	Ala	Leu	Asp	Ser	Asn	
72					170					175					180	
74	aat	act	atg	cca	ttt	act	cca	gca	gct	atg	aga	tct	gag	aca	ttg	585
75	Asn	Thr	Met	Pro	Phe	Thr	Pro	Ala	Ala	Met	Arg	Ser	Glu	Thr	Leu	
76					185					190					195	
78	ggt	ttt	tat	cca	tgg	aaa	cca	acc	ata	cca	act	cca	tgg	aga	tat	630
79	Gly	Phe	Tyr	Pro	Trp	Lys	Pro	Thr	Ile	Pro	Thr	Pro	Trp	Arg	Tyr	
80					200					205					210	
82	tat	ttt	caa	tgg	gat	aga	aca	tta	ata	cca	tct	cat	act	gga	act	675
83	Tyr	Phe	Gln	Trp	Asp	Arg	Thr	Leu	Ile	Pro	Ser	His	Thr	Gly	Thr	
84					215					220					225	
86	agt	ggc	aca	cca	aca	aat	ata	tat	cat	ggt	aca	gat	cca	gat	gat	720
87	Ser	Gly	Thr	Pro	Thr	Asn	Ile	Tyr	His	Gly	Thr	Asp	Pro	Asp	Asp	
88					230					235					240	
90	gtt	caa	ttt	tat	act	att	gaa	aat	tct	gtg	cca	gta	cac	tta	cta	765
91	Val	Gln	Phe	Tyr	Thr	Ile	Glu	Asn	Ser	Val	Pro	Val	His	Leu	Leu	
92					245					250					255	
94	aga	aca	ggt	gat	gaa	ttt	gct	aca	gga	aca	ttt	ttt	ttt	gat	tgt	810
95	Arg	Thr	Gly	Asp	Glu	Phe	Ala	Thr	Gly	Thr	Phe	Phe	Phe	Asp	Cys	
96					260					265					270	
98	aaa	cca	tgt	aga	cta	aca	cat	aca	tgg	caa	aca	aac	aga	gca	ttg	855
99	Lys	Pro	Cys	Arg	Leu	Thr	His	Thr	Trp	Gln	Thr	Asn	Arg	Ala	Leu	
100					275					280					285	
102	ggc	tta	cca	cca	ttt	cta	aat	tct	ttg	cct	caa	tct	gaa	gga	gct	900
103	Gly	Leu	Pro	Pro	Phe	Leu	Asn	Ser	Leu	Pro	Gln	Ser	Glu	Gly	Ala	
104					290					295					300	
106	act	aac	ttt	ggt	gat	ata	gga	gtt	caa	caa	gat	aaa	aga	cgt	ggt	945
107	Thr	Asn	Phe	Gly	Asp	Ile	Gly	Val	Gln	Gln	Asp	Lys	Arg	Arg	Gly	
108					305					310					315	
110	gta	act	caa	atg	gga	aat	aca	gac	tat	att	act	gaa	gct	act	att	990
111	Val	Thr	Gln	Met	Gly	Asn	Thr	Asp	Tyr	Ile	Thr	Glu	Ala	Thr	Ile	
112					320					325					330	
114	atg	aga	cca	gct	gag	gtt	ggt	tat	agt	gca	cca	tat	tat	tct	ttt	1035
115	Met	Arg	Pro	Ala	Glu	Val	Gly	Tyr	Ser	Ala	Pro	Tyr	Tyr	Ser	Phe	
116					335					340					345	
118	gaa	gcg	tct	aca	caa	ggg	cca	ttt	aaa	ata	cct	att	gca	gca	gga	1080
119	Glu	Ala	Ser	Thr	Gln	Gly	Pro	Phe	Lys	Ile	Pro	Ile	Ala	Ala	Gly	
120					350					355					360	
122	cgg	ggg	gga	gcg	caa	aca	gat	gaa	aat	caa	gca	gca	gat	ggt	gat	1125
123	Arg	Gly	Gly	Ala	Gln	Thr	Asp	Glu	Asn	Gln	Ala	Ala	Asp	Gly	Asp	
124					365					370					375	
126	cca	aga	tat	gca	ttt	ggt	aga	caa	cat	ggt	caa	aaa	act	act	aca	1170
127	Pro	Arg	Tyr	Ala	Phe	Gly	Arg	Gln	His	Gly	Gln	Lys	Thr	Thr	Thr	

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DATE: 03/18/2002

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TIME: 08:30:47

Input Set : A:\PTO.AMC.txt

Output Set: N:\CRF3\03182002\I873881B.raw

128		380		385		390	
130	aca gga gaa aca cct gag aga ttt aca tat ata gca cat caa gat					1215	
131	Thr Gly Glu Thr Pro Glu Arg Phe Thr Tyr Ile Ala His Gln Asp						
132		395		400		405	
134	aca gga aga tat cca gca gga gat tgg att caa aat att aac ttt					1260	
135	Thr Gly Arg Tyr Pro Ala Gly Asp Trp Ile Gln Asn Ile Asn Phe						
136		410		415		420	
138	aac ctt cct gta aca aat gat aat gta ttg cta cca aca gat cca					1305	
139	Asn Leu Pro Val Thr Asn Asp Asn Val Leu Leu Pro Thr Asp Pro						
140		425		430		435	
142	att gga ggt aaa aca gga atc aac tat act aat ata ttt aat act					1350	
143	Ile Gly Gly Lys Thr Gly Ile Asn Tyr Thr Asn Ile Phe Asn Thr						
144		440		445		450	
146	tat ggt cct tta act gca tta aat aat gta cca cca gtt tat cca					1395	
147	Tyr Gly Pro Leu Thr Ala Leu Asn Asn Val Pro Pro Val Tyr Pro						
148		455		460		465	
150	aat ggt caa att tgg gat aaa gaa ttt gat act gac tta aaa cca					1440	
151	Asn Gly Gln Ile Trp Asp Lys Glu Phe Asp Thr Asp Leu Lys Pro						
152		470		475		480	
154	aga ctt cat gta aat gca cca ttt gtt tgt caa aat aat tgt cct					1485	
155	Arg Leu His Val Asn Ala Pro Phe Val Cys Gln Asn Asn Cys Pro						
156		485		490		495	
158	ggt caa tta ttt gta aaa gtt gcg cct aat tta aca aat gaa tat					1530	
159	Gly Gln Leu Phe Val Lys Val Ala Pro Asn Leu Thr Asn Glu Tyr						
160		500		505		510	
162	gat cct gat gca tct gct aat atg tca aga att gta act tac tca					1575	
163	Asp Pro Asp Ala Ser Ala Asn Met Ser Arg Ile Val Thr Tyr Ser						
164		515		520		525	
166	gat ttt tgg tgg aaa ggt aaa tta gta ttt aaa gct aaa cta aga					1620	
167	Asp Phe Trp Trp Lys Gly Lys Leu Val Phe Lys Ala Lys Leu Arg						
168		530		535		540	
170	gca tct cat act tgg aat cca att caa caa atg agt att aat gta					1665	
171	Ala Ser His Thr Trp Asn Pro Ile Gln Gln Met Ser Ile Asn Val						
172		545		550		555	
174	gat aac caa ttt aac tat cta cca aat aat att gga gct atg aaa					1710	
175	Asp Asn Gln Phe Asn Tyr Leu Pro Asn Asn Ile Gly Ala Met Lys						
176		560		565		570	
178	att gta tat gaa aaa tct caa cta gca cct aga aaa tta tat					1752	
179	Ile Val Tyr Glu Lys Ser Gln Leu Ala Pro Arg Lys Leu Tyr						
180		575		580			
182	taatatactt actatgtttt tatgggttatt acatatcaac tagcacctag					1802	
184	aaaattatat taatatactt actatgtttt tatgtttatt acatattatt					1852	
186	ttaagattaa tttaaattaca acatagaaat attgtacttg tatttgatat					1902	
188	aggatttaga aggtttgtta tatgggtatac aataactgta agaaatagaa					1952	
190	gaacatttag atcatggta gtatgggtata caataactgt aagaaataga					2002	
192	agaacattta gatcatgggt agtagtttgt tttataaaat gtaattgtaa					2052	
194	actattaatg tatgttgta tgggtgtgggt ggttggttg tttgccctta					2102	
196	gaatatgta aggacaaaa aaatcaataa aagacattta aaacttaatg					2152	
198	gtctcgtata ctgtctataa ggtgaactaa ccttaccata agtatcaact					2202	

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Input Set : A:\PTO.AMC.txt

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202 tg                                                                2254
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207 <211> LENGTH: 1575
208 <212> TYPE: DNA
209 <213> ORGANISM: rabies virus
211 <220> FEATURE:
212 <223> OTHER INFORMATION:
214 <400> SEQUENCE: 2
215 atg gtt cct cag gct ctc ctg ttt gta ccc ctt ctg gtt ttt      42
216 Met Val Pro Gln Ala Leu Leu Phe Val Pro Leu Leu Val Phe
217 1 5 10
219 cca ttg tgt ttt ggg aaa ttc cct att tac acg ata cta gac      84
220 Pro Leu Cys Phe Gly Lys Phe Pro Ile Tyr Thr Ile Leu Asp
221 15 20 25
223 aag ctt ggt ccc tgg agc ccg att gac ata cat cac ctc agc      126
224 Lys Leu Gly Pro Trp Ser Pro Ile Asp Ile His His Leu Ser
225 30 35 40
227 tgc cca aac aat ttg gta gtg gag gac gaa gga tgc acc aac      168
228 Cys Pro Asn Asn Leu Val Val Glu Asp Glu Gly Cys Thr Asn
229 45 50 55
231 ctg tca ggg ttc tcc tac atg gaa ctt aaa gtt gga tac atc      210
232 Leu Ser Gly Phe Ser Tyr Met Glu Leu Lys Val Gly Tyr Ile
233 60 65 70
235 tta gcc ata aaa atg aac ggg ttc act tgc aca ggc gtt gtg      252
236 Leu Ala Ile Lys Met Asn Gly Phe Thr Cys Thr Gly Val Val
237 75 80
239 acg gag gct gaa acc tac act aac ttc gtt ggt tat gtc aca      294
240 Thr Glu Ala Glu Thr Tyr Thr Asn Phe Val Gly Tyr Val Thr
241 85 90 95
243 acc acg ttc aaa aga aag cat ttc cgc cca aca cca gat gca      336
244 Thr Thr Phe Lys Arg Lys His Phe Arg Pro Thr Pro Asp Ala
245 100 105 110
247 tgt aga gcc gcg tac aac tgg aag atg gcc ggt gac ccc aga      378
248 Cys Arg Ala Ala Tyr Asn Trp Lys Met Ala Gly Asp Pro Arg
249 115 120 125
251 tat gaa gag tct cta cac aat ccg tac cct gac tac cgc tgg      420
252 Tyr Glu Glu Ser Leu His Asn Pro Tyr Pro Asp Tyr Arg Trp
253 130 135 140
255 ctt cga act gta aaa acc acc aag gag tct ctc gtt atc ata      462
256 Leu Arg Thr Val Lys Thr Thr Lys Glu Ser Leu Val Ile Ile
257 145 150
259 tct cca agt gta gca gat ttg gac cca tat gac aga tcc ctt      504
260 Ser Pro Ser Val Ala Asp Leu Asp Pro Tyr Asp Arg Ser Leu
261 155 160 165
263 cac tcg agg gtc ttc cct agc ggg aag tgc tca gga gta gcg      546
264 His Ser Arg Val Phe Pro Ser Gly Lys Cys Ser Gly Val Ala
265 170 175 180
267 gtg tct tct acc tac tgc tcc act aac cac gat tac acc att      588

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RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/873,881B

DATE: 03/18/2002

TIME: 08:30:47

Input Set : A:\PTO.AMC.txt

Output Set: N:\CRF3\03182002\I873881B.raw

268	Val	Ser	Ser	Thr	Tyr	Cys	Ser	Thr	Asn	His	Asp	Tyr	Thr	Ile	
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271	tgg	atg	ccc	gag	aat	ccg	aga	cta	ggg	atg	tct	tgt	gac	att	630
272	Trp	Met	Pro	Glu	Asn	Pro	Arg	Leu	Gly	Met	Ser	Cys	Asp	Ile	
273			200					205					210		
275	ttt	acc	aat	agt	aga	ggg	aag	aga	gca	tcc	aaa	ggg	agt	gag	672
276	Phe	Thr	Asn	Ser	Arg	Gly	Lys	Arg	Ala	Ser	Lys	Gly	Ser	Glu	
277			215					220							
279	act	tgc	ggc	ttt	gta	gat	gaa	aga	ggc	cta	tat	aag	tct	tta	714
280	Thr	Cys	Gly	Phe	Val	Asp	Glu	Arg	Gly	Leu	Tyr	Lys	Ser	Leu	
281	225				230				235						
283	aaa	gga	gca	tgc	aaa	ctc	aag	tta	tgt	gga	gtt	cta	gga	ctt	756
284	Lys	Gly	Ala	Cys	Lys	Leu	Lys	Leu	Cys	Gly	Val	Leu	Gly	Leu	
285	240				245				250						
287	aga	ctt	atg	gat	gga	aca	tgg	gtc	gcg	atg	caa	aca	tca	aat	798
288	Arg	Leu	Met	Asp	Gly	Thr	Trp	Val	Ala	Met	Gln	Thr	Ser	Asn	
289		255			260				265						
291	gaa	acc	aaa	tgg	tgc	gct	ccc	gat	cag	ttg	gtg	aac	ctg	cac	840
292	Glu	Thr	Lys	Trp	Cys	Pro	Pro	Asp	Gln	Leu	Val	Asn	Leu	His	
293			270					275					280		
295	gac	ttt	cgc	tca	gac	gaa	att	gag	cac	ctt	gtt	gta	gag	gag	882
296	Asp	Phe	Arg	Ser	Asp	Glu	Ile	Glu	His	Leu	Val	Val	Glu	Glu	
297			285					290							
299	ttg	gtc	agg	aag	aga	gag	gag	tgt	ctg	gat	gca	cta	gag	tcc	924
300	Leu	Val	Arg	Lys	Arg	Glu	Glu	Cys	Leu	Asp	Ala	Leu	Glu	Ser	
301	295				300				305						
303	atc	atg	aca	aac	aag	tca	gtg	agt	ttc	aga	cgt	ctc	agt	cat	966
304	Ile	Met	Thr	Thr	Lys	Ser	Val	Ser	Phe	Arg	Arg	Leu	Ser	His	
305	310				315				320						
307	tta	aga	aaa	ctt	gtc	cct	ggg	ttt	gga	aaa	gca	tat	acc	ata	1008
308	Leu	Arg	Lys	Leu	Val	Pro	Gly	Phe	Gly	Lys	Ala	Tyr	Thr	Ile	
309			325				330					335			
311	ttc	aac	aag	acc	ttg	atg	gaa	gcc	gat	gct	cac	tac	aag	tca	1050
312	Phe	Asn	Lys	Thr	Leu	Met	Glu	Ala	Asp	Ala	His	Tyr	Lys	Ser	
313			340					345					350		
315	gtc	aga	act	tgg	aat	gag	atc	ctc	cct	tca	aaa	ggg	tgt	tta	1092
316	Val	Arg	Thr	Trp	Asn	Glu	Ile	Leu	Pro	Ser	Lys	Gly	Cys	Leu	
317			355					360							
319	aga	gtt	ggg	ggg	agg	tgt	cat	cct	cat	gtg	aac	ggg	gtg	ttt	1134
320	Arg	Val	Gly	Gly	Arg	Cys	His	Pro	His	Val	Asn	Gly	Val	Phe	
321	365				370				375						
323	ttc	aat	ggt	ata	ata	tta	gga	cct	gac	ggc	aat	gtc	tta	atc	1176
324	Phe	Asn	Gly	Ile	Ile	Leu	Gly	Pro	Asp	Gly	Asn	Val	Leu	Ile	
325	380				385				390						
327	cca	gag	atg	caa	tca	tcc	ctc	ctc	cag	caa	cat	atg	gag	ttg	1218
328	Pro	Glu	Met	Gln	Ser	Ser	Leu	Leu	Gln	Gln	His	Met	Glu	Leu	
329			395				400					405			
331	ttg	gaa	tcc	tcg	gtt	atc	ccc	ctt	gtg	cac	ccc	ctg	gca	gac	1260
332	Leu	Glu	Ser	Ser	Val	Ile	Pro	Leu	Val	His	Pro	Leu	Ala	Asp	

VERIFICATION SUMMARY

PATENT APPLICATION: US/09/873,881B

DATE: 03/18/2002

TIME: 08:30:48

Input Set : A:\PTO.AMC.txt

Output Set: N:\CRF3\03182002\I873881B.raw

L:21 M:283 W: Missing Blank Line separator, <220> field identifier

L:912 M:334 W: (2) Invalid Amino Acid in Coding Region, NUMBER OF INVALID KEYS:1



OIPE

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/873,881B

DATE: 03/06/2002

TIME: 10:20:34

mar

Input Set : A:\corrected sequence listing for Scott.txt

Output Set: N:\CRF3\03062002\I873881B.raw

Does Not Comply
Corrected Diskette Needed

needed
hard
return

3 <110> APPLICANT: Scott, Fred W.
5 <120> TITLE OF INVENTION: Recombinant Multivalent Viral Vaccine
7 <130> FILE REFERENCE: 18617.0016
9 <140> CURRENT APPLICATION NUMBER: US 09/873,881B
10 <141> CURRENT FILING DATE: 2001-06-04
12 <150> PRIOR APPLICATION NUMBER: US 08/552,369
13 <151> PRIOR FILING DATE: 1995-11-03
15 <160> NUMBER OF SEQ ID NOS: 19

ERRORED SEQUENCES

932 <210> SEQ ID NO: 19
933 <211> LENGTH: 1979
934 <212> TYPE: DNA
935 <213> ORGANISM: feline leukemia virus
937 <220> FEATURE:
938 <223> OTHER INFORMATION:
940 <400> SEQUENCE: 19
941 accaccaatc aagacctctc ggacagcccc agctcagacg atccatcaag 50
943 atg gaa agt cca acg cac cca aaa ccc tct aaa gat aag act ctc 95
944 Met Glu Ser Pro Thr His Pro Lys Pro Ser Lys Asp Lys Thr Leu
945 1 5 10 15
947 tgg tgg aac tta gcg ttt ctg gtg ggg atc tta ttt aca ata gac 140
948 Ser Trp Asn Leu Ala Phe Leu Val Gly Ile Leu Phe Thr Ile Asp
949 20 25 30
951 ata gga atg gcc aat cct agt cca cac caa ata tat aat gta act 185
952 Ile Gly Met Ala Asn Pro Ser Pro His Gln Ile Tyr Asn Val Thr
953 35 40 45
955 tgg gta ata acc aat gta caa act aac acc caa gct aac gcc acc 230
956 Trp Val Ile Thr Asn Val Gln Thr Asn Thr Gln Ala Asn Ala Thr
957 50 55 60
959 tct atg tta gga acc tta acc gat gcc tac cct acc cta cat gtt 275
960 Ser Met Leu Gly Thr Leu Thr Asp Ala Tyr Pro Thr Leu His Val
961 65 70 75
963 gac tta tgt gac cta gtg gga gac acc tgg gaa cct ata gtc cta 320
964 Asp Leu Cys Asp Leu Val Gly Asp Thr Trp Glu Pro Ile Val Leu
965 80 85 90
967 aac cca acc aat gta aaa cac ggg gca cgt tac tcc tcc tca aaa 365
968 Asn Pro Thr Asn Val Lys His Gly Ala Arg Tyr Ser Ser Ser Lys
969 95 100 105
971 tat gga tgt aaa act aca gat aga aaa aaa cag caa cag aca tac 410
972 Tyr Gly Cys Lys Thr Thr Asp Arg Lys Lys Gln Gln Gln Thr Tyr

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/873,881B

DATE: 03/06/2002

TIME: 10:20:34

Input Set : A:\corrected sequence listing for Scott.txt

Output Set: N:\CRF3\03062002\I873881B.raw

973	110	115	120	
975 ccc ttt tac gtc tgc ccc gga cat gcc ccc tcg ttg ggg cca aag				455
976 Pro Phe Tyr Val Cys Pro Gly His Ala Pro Ser Leu Gly Pro Lys				
977	125	130	135	
979 gga aca cat tgt gga ggg gca caa gat ggg ttt tgt gcc gca tgg				500
980 Gly Thr His Cys Gly Gly Ala Gln Asp Gly Phe Cys Ala Ala Trp				
981	140	145	150	
983 gga tgt gag acc acc gga gaa gct tgg tgg aag ccc acc tcc tca				545
984 Gly Cys Glu Thr Thr Gly Glu Thr Trp Trp Lys Pro Thr Ser Ser				
985	155	160	165	
987 tgg gac tat atc aca gta aaa aga ggg agt agt cag gac aat agc				590
988 Trp Asp Tyr Ile Thr Val Lys Arg Gly Ser Ser Gln Asp Asn Ser				
989	170	175	180	
991 tgt gag gga aaa tgc aac ccc ctg gtt ttg cag ttc acc cag aag				635
992 Cys Glu Gly Lys Cys Asn Pro Leu Val Leu Gln Phe Thr Gln Lys				
993	185	190	195	
995 gga aga caa gcc tct tgg gac gga cct aag atg tgg gga ttg cga				680
996 Gly Arg Gln Ala Ser Trp Asp Gly Pro Lys Met Trp Gly Leu Arg				
997	200	205	210	
999 cta tac cgt aca gga tat gac cct atc gct tta ttc acg gtg tcc				725
1000 Leu Tyr Arg Thr Gly Tyr Asp Pro Ile Ala Leu Phe Thr Val Ser				
1001	215	220	225	
1003 cgg cag gta tca acc att acg ccg cct cag gca atg gga cca aac				770
1004 Arg Gln Val Ser Thr Ile Thr Pro Pro Gln Ala Met Gly Pro Asn				
1005	230	235	240	
1007 cta gtc tta cct gat caa aaa ccc cca tcc cga caa tct caa aca				815
1008 Leu Val Leu Pro Asp Gln Lys Pro Pro Ser Arg Gln Ser Gln Thr				
1009	245	250	255	
1011 ggg tcc aaa gtg gcg acc cag agg ccc caa acg aat gaa agc gcc				860
1012 Gly Ser Lys Val Ala Thr Gln Arg Pro Gln Thr Asn Glu Ser Ala				
1013	260	265	270	
1015 cca agg tct gtt gcc ccc acc acc atg ggt ccc aaa cgg att ggg				905
1016 Pro Arg Ser Val Ala Pro Thr Thr Met Gly Pro Lys Arg Ile Gly				
1017	275	280	285	
1019 acc gga gat agg tta ata aat tta gta caa ggg aca tac cta gcc				950
1020 Thr Gly Asp Arg Leu Ile Asn Leu Val Gln Gly Thr Tyr Leu Ala				
1021	290	295	300	
1023 tta aat gcc acc gac ccc aac aaa act aaa gac tgt tgg ctc tgc				995
1024 Leu Asn Ala Thr Asp Pro Asn Lys Thr Lys Asp Cys Trp Leu Cys				
1025	305	310	315	
1027 ctg gtt tct cga cca ccc tat tac gaa ggg att gca atc tta ggt				1040
1028 Leu Val Ser Arg Pro Pro Tyr Tyr Glu Gly Ile Ala Ile Leu Gly				
1029	320	325	330	
1031 acc tac agc aac caa aca aac ccc ccc cca tcc tgc cta tct act				1085
1032 Asn Tyr Ser Asn Gln Thr Asn Pro Pro Pro Ser Cys Leu Ser Ile				
1033	335	340	345	
1035 ccg caa cac aaa cta act ata tct gaa gta tca ggg caa gga atg				1130
1036 Pro Gln His Lys Leu Thr Ile Ser Glu Val Ser Gly Gln Gly Met				
1037	350	355	360	

RAW SEQUENCE LISTING

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```

1039 tgc ata ggg act gtt cct aaa acc cac cag gct ttg tgc aat aag 1175
1040 Cys Ile Gly Thr Val Pro Lys Thr His Gln Ala Leu Cys Asn Lys
1041          365          370          375
1043 aca caa cag gga cat aca ggg gcg cac tat cta gcc gcc ccc aac 1220
1044 Thr Gln Gln Gly His Thr Gly Ala His Tyr Leu Ala Ala Pro Asn
1045          380          385          390
1047 ggc acc tat tgg gcc tgt aac act gga ctc acc cca tgc att tcc 1265
1048 Gly Thr Tyr Trp Ala Cys Asn Thr Gly Leu Thr Pro Cys Ile Ser
1049          395          400          405
1051 atg gcg gtg ctc aat tgg acc tct gat ttt tgt gtc tta atc gaa 1310
1052 Met Ala Val Leu Asn Trp Thr Ser Asp Phe Cys Val Leu Ile Glu
1053          410          415          420
1055 tta tgg ccc aga gtg act tac cat caa ccc gaa tat gtg tac aca 1355
1056 Leu Trp Pro Arg Val Thr Tyr His Gln Pro Glu Tyr Val Tyr Thr
1057          425          430          435
1059 cat ttt gcc aaa gct gtc agg ttc cga aga gaa cca ata tca cta 1400
1060 His Phe Ala Lys Ala Val Arg Phe Arg Arg Glu Pro Ile Ser Leu
1061          440          445          450
1063 acg gtt gcc ctt atg ttg gga gga ctt act gta ggg ggc ata gcc 1445
1064 Thr Val Ala Leu Met Leu Gly Gly Leu Thr Val Gly Gly Ile Ala
1065          455          460          465
1067 gcg ggg gtc gga aca ggg act aaa gcc ctc ctt gaa aca gcc cag 1490
1068 Ala Gly Val Gly Thr Gly Thr Lys Ala Leu Leu Glu Thr Ala Gln
1069          470          475          480
1071 ttc aga caa cta caa atg gcc atg cac aca gac atc cag gcc cta 1535
1072 Phe Arg Gln Leu Gln Met Ala Met His Thr Asp Ile Gln Ala Leu
1073          485          490          495
1075 gaa gaa tca att agt gcc tta gaa aag tcc ctg acc tcc ctt tct 1580
1076 Glu Glu Ser Ile Ser Ala Leu Glu Lys Ser Leu Thr Ser Leu Ser
1077          500          505          510
1079 gaa gta gtc tta caa aac aga cgg ggc cta gat att cta ttc tta 1625
1080 Glu Val Val Leu Gln Asn Arg Arg Glu Leu Asp Ile Leu Phe Leu
1081          515          520          525
1083 caa gag gga ggg ctc tgt gcc gca ttg aaa gaa gaa tgt tgc ttc 1670
1084 Gln Glu Gly Gly Leu Cys Ala Ala Leu Lys Glu Glu Cys Cys Phe
1085          530          535          540
1087 tat gcg gat cac acc gga ctc gtc cga gac aat atg gcc aaa tta 1715
1088 Tyr Ala Asp His Thr Gly Leu Val Arg Asp Asn Met Ala Lys Leu
1089          545          550          555
1091 aga gaa aga cta aaa cag cgg caa caa ctg ttt gac tcc caa cag 1760
1092 Arg Glu Arg Leu Lys Gln Arg Gln Gln Leu Phe Asp Ser Gln Gln
1093          560          565          570
1095 gga tgg ttt gaa gga tgg ttc aac aag tcc ccc tgg ttt aca acc 1805
1096 Gly Trp Phe Glu Gly Trp Phe Asn Lys Ser Pro Trp Phe Thr Thr
1097          575          580          585
1099 cta att tcc tcc att atg ggc ccc tta cta atc cta ctc cta att 1850
1100 Leu Ile Ser Ser Ile Met Gly Pro Leu Leu Ile Leu Leu Ile
1101          590          595          600

```

W--> 1103

ctc ctc ttc ggc cca tgc atc ctt aac cga tta gta caa ttc gta 1895 Leu Leu Phe Gly Pro Cys Ile I

↑
insert hard return

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```

W--> 1104                605                610                615
W--> 1106
aaa gac aga ata tct gtg gta cag gct tta att tta acc caa cag 1940 Lys Asp Arg Ile Ser Val Val c
W--> 1107                620                625                630
E--> 1109 tac caa cag ata aag caa tac gat ccg gac cga cca tga                1979
      1110 Tyr Gln Gln Ile Lys Gln Tyr Asp Pro Asp Arg Pro
E--> 1111                635                640

```